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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Sebastian HOEROLD, et al: : Attorney Docket: 2002DE128  
Serial No.: to be assigned :  
Filed: March 3, 2005 :  
For: Flame Retardant-Stabilizer Combination For Thermoplastic Polymers

Transmittal Letter

Notification of Amendments Under PCT Article 19 and 34


Mail Stop:  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Preliminary to the examination of the above-identified application, an Amendment was filed under Article 19 and Article 34 of the Patent Cooperation Treaty prior to the International Preliminary Examination. Please note that the attached pages 17, 18, 19 and 20 for claims 1 - 20 were filed under Article 19 at the International Office on January 19, 2004. Article 34 amendments to the claims, claim pages 17, 18, 19 and 20 for claims 1-18 were filed with the European Patent Office. We enclose an English translation of the claims for your convenience.

Applicant respectfully requests submission of these pages before examination of the application and before entry of the Preliminary Amendment.

Respectfully submitted,

  
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**(CUSTOMER NUMBER 25,255)**

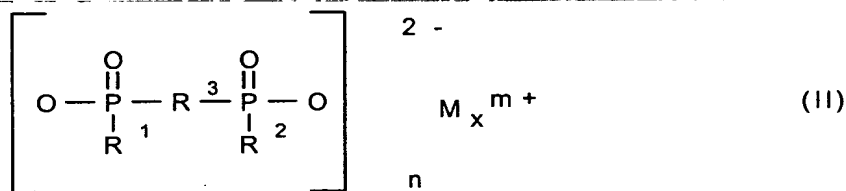
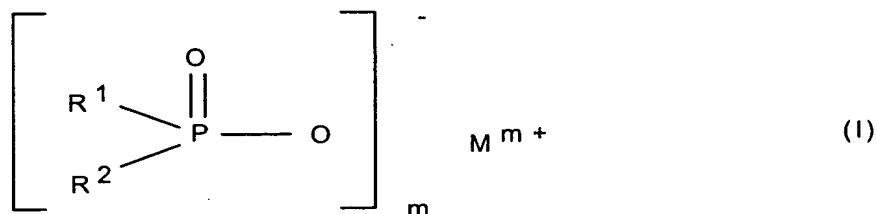
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[filed at the International Office on January 19, 2004 (01.19.04); new claim 1 composed from original claims 1 and 10; original claims 6-15 and 31 deleted]

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What is claimed is:

1. A flame retardant-stabilizer combination for thermoplastic polymers, comprising, as component A, from 25 to 99.9% by weight of a phosphinic acid salt of the formula (I) and/or of a diphosphinic acid salt of the formula (II) and/or polymers thereof



15 where

R<sup>1</sup>, R<sup>2</sup> are the same or different and are each C<sub>1</sub>-C<sub>6</sub>-alkyl, linear or branched, and/or aryl;

R<sup>3</sup> is C<sub>1</sub>-C<sub>10</sub>-alkylene, linear or branched, C<sub>6</sub>-C<sub>10</sub>-arylene, -alkylarylene or -arylalkylene;

20 M is Mg, Ca, Al, Sb, Sn, Ge, Ti, Zn, Fe, Zr, Ce, Bi, Sr, Mn, Li, Na, K and/or a protonated nitrogen base;

m is from 1 to 4;

n is from 1 to 4;

x is from 1 to 4,

as component B, from 0 to 75% by weight of melamine polyphosphate and,  
as component C, from 0.1 to 50% by weight of a basic or amphoteric oxide,  
hydroxide, carbonate, silicate, borate, stannate, mixed oxide hydroxide, oxide  
hydroxide carbonate, hydroxide silicate or hydroxide borate or mixtures of these  
5 substances, the sum of the components always being 100% by weight.

2. A flame retardant-stabilizer combination as claimed in claim 1, wherein  $R^1$ ,  $R^2$   
are the same or different and are each  $C_1$ - $C_6$ -alkyl, linear or branched, and/or  
phenyl.

3. A flame retardant-stabilizer combination as claimed in claim 1 or 2, wherein  
 $R^1$ ,  $R^2$  are the same or different and are each methyl, ethyl, n-propyl, isopropyl,  
n-butyl, tert-butyl, n-pentyl and/or phenyl.

4. A flame retardant-stabilizer combination as claimed in one or more of claims 1  
to 3, wherein  $R^3$  is methylene, ethylene, n-propylene, isopropylene, n-butylene, tert-  
butylene, n-pentylene, n-octylene or n-dodecylene; phenylene or naphthylene;  
methylphenylene, ethylphenylene, tert-butylphenylene, methylnaphthylene,  
ethylnaphthylene or tert-butyl naphthylene; phenylmethylene, phenylethylene,  
20 phenylpropylene or phenylbutylene.

5. A flame retardant-stabilizer combination as claimed in one or more of claims 1  
to 4, wherein M is a calcium, aluminum or zinc ion.

6. A flame retardant-stabilizer combination as claimed in one or more of claims 1  
to 5, wherein component C is magnesium oxide, calcium oxide, aluminum oxide, zinc  
oxide, manganese oxide and/or tin oxide.

7. A flame retardant-stabilizer combination as claimed in one or more of claims 1  
to 5, wherein component C is aluminum hydroxide, boehmite, dihydrotalcite,  
hydrocalumite, magnesium hydroxide, calcium hydroxide, zinc hydroxide, tin oxide  
hydrate, manganese hydroxide, zinc borate, basic zinc silicate or zinc stannate.

8. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 7, wherein from 50 to 90% by weight of component A, from 0 to 50% by weight of component B and from 1 to 20% by weight of component C are present.

5 9. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 8, wherein from 50 to 80% by weight of component A, from 20 to 50% by weight of component B and from 2 to 20% by weight of component C are present.

10 10. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 7, wherein from 60 to 98% by weight of component A and from 2 to 40% by weight of component C are present.

11. A flame-retardant plastics molding composition, comprising a flame retardant-stabilizer combination as claimed in one or more of claims 1 to 10.

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12. A flame-retardant plastics molding composition as claimed in claim 11, wherein the plastics used are thermoplastic polymers of the type high-impact polystyrene, polyphenylene ether, polyamides, polyesters, polycarbonates and blends or polymer blends of the type ABS (acrylonitrile-butadiene-styrene) or  
20 PC/ABS (polycarbonate/acrylonitrile-butadiene-styrene) or PPE/HIPS (polyphenylene ether/HI polystyrene) plastics.

13. A flame-retardant plastics molding composition as claimed in claim 11 or 12, wherein the plastics are polyamides, polyesters and PPE/HIPS blends.

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14. A flame-retardant plastics molding composition as claimed in one or more of claims 11 to 13, which comprises the flame retardant-stabilizer combination in an amount of from 2 to 50% by weight %, based on the plastics molding composition.

30 15. A flame-retardant plastics molding composition as claimed in one or more of claims 11 to 14, which comprises the flame retardant-stabilizer combination in an amount of from 10 to 30% by weight, based on the plastics molding composition.

REPLACED BY  
ART 34 AMDT

16. A flame-retardant plastics molding composition as claimed in one or more of claims 11 to 14, which comprises the flame retardant-stabilizer combination having the composition as claimed in claim 20.

5 17. A polymer shaped body, film, thread or fiber comprising a flame retardant-stabilizer combination as claimed in one or more of claims 1 to 10.

10 18. A polymer shaped body, film, thread or fiber as claimed in claim 17, wherein the polymers are high-impact polystyrene, polyphenylene ethers, polyamides, polyesters, polycarbonates and blends or polymer blends of the type ABS (acrylonitrile-butadiene-styrene) or PC/ABS (polycarbonate/acrylonitrile-butadiene-styrene), polyamide, polyester and/or ABS.

15 19. A polymer shaped body, film, thread or fiber as claimed in claim 17 or 18, which comprises the flame retardant-stabilizer combination in an amount of from 2 to 50% by weight, based on the polymer content.

20 20. A polymer shaped body, film, thread or fiber as claimed in one or more of claims 17 to 19, which comprises the flame retardant-stabilizer combination in an amount of from 10 to 30% by weight, based on the polymer content.